



EASY TRAVEL

Lite

Service Manual

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NOTE: Design details may change without notice

1. SYSTEM COMPONENTS AND DETAILS

1.1. *EasyTravel Lite* parts – (Figure 1)

1. Battery pack (detachable)
2. Front column (foldable)
3. Column lock/release triggers
4. Controller cover
5. Charging socket
6. Front drive wheels
7. Foot platform
8. Seat shell
9. Seat cushions
10. Folding seat latch
11. Rear wheel
12. Utility basket (holding capacity 9kg)
13. Control Panel
14. Freewheel switch
15. Charger and connecting cables (Fig. 1B)



Figure 1



Figure 1B

1.2. Control Panel – Figure 2

1. Switch
2. Hand control lever (right and left)
3. Speed adjusting knob
4. Battery indicator light (LED)
5. Hand-grips



Figure 2

BELL: If the user requires an audible warning device, a standard bicycle bell can be attached to the handlebar.

2. SERVICE

For reasons of safety and the prevention of accidents caused by wear which is not detected in time, the **EasyTravel Lite** should be tested and serviced once a year. All safety-related components of the **EasyTravel Lite** should be checked and serviced, safety and functional tests should be performed. It is important to detect initial wear in time and to use exclusively original spares, or such parts that were authorized by the manufacturer.

Test the following maintenance items:

- ❑ The components of the **EasyTravel Lite** frame for overload and initial cracks.
- ❑ The collector brushes of the electric motor (3-A) for wear. Wear limit is approx. 7 mm.
- ❑ Wear of tires on wheels.
- ❑ All screws and attachments for safe securing, cable connections for wear, and the mechanisms of the **EasyTravel Lite** for correct functioning.
- ❑ The proper functioning of the electronic system and brakes.

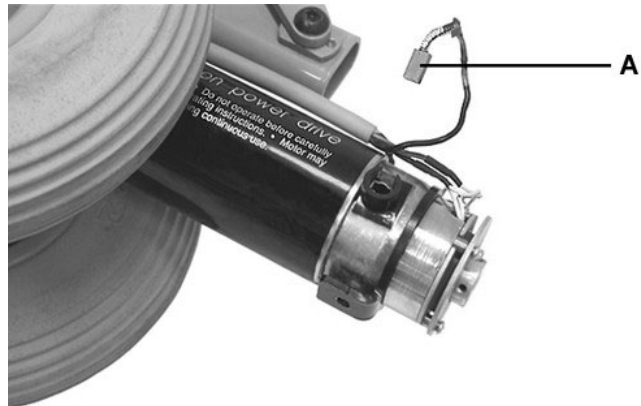


Figure 3

3. SPARE PARTS REPLACEMENT

3.1 Control Panel Assembly

Kit number E0-00-1-040 (for models with front wheel drive)

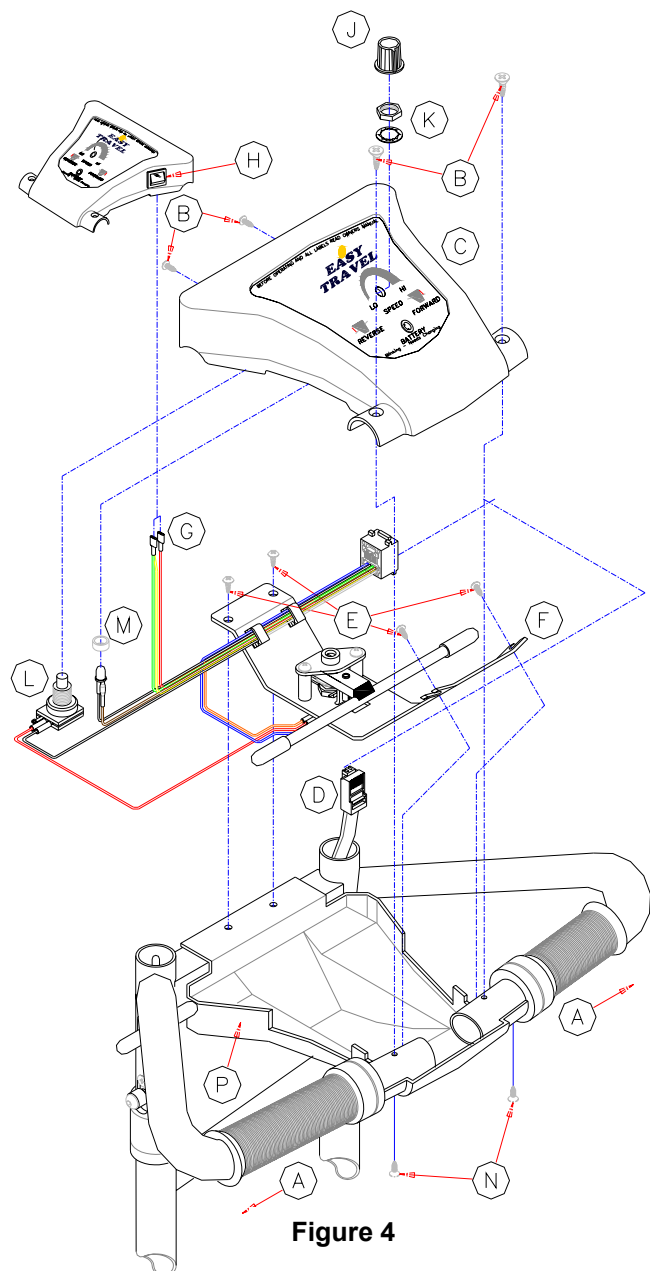
Kit Number E0-00-1-202 (for models with rear wheel drive)

Tools:

Phillips #2 Screwdriver

For kit number E0-00-1-202, see next page.

1. Push Handgrips (4-A) outwards
2. Open Screws (4-B) and remove Control Panel Cover (4-C)
3. Disconnect the Control Cable (4-D)
4. Open Screws (4-E) and remove Control Panel (4-F)
5. Open Screws (4-N) and remove Panel Bottom Cover (4-P)
6. Place new Bottom Cover (4-P) and secure it with Screws (4-N)
7. Secure new Control Panel (4-F) with Screws (4-E)
8. Connect the Control Cable (4-D) to Control Panel (4-F)
9. Secure Control Panel Cover (4-C) with Screws (4-B)
10. Push Handgrips (4-A) back over the Cover
11. Check all Control Panel functions: indication, drive, brake and speed control



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Kit Number E0-00-1-202

Tools:

Phillips #2 Screwdriver

1. Open Screws (5-A) and remove top and bottom Control Panel Cover (5-B, C)
2. Disconnect the Control Cable (5-D)
3. Open Screws (5-E) and remove Control Panel (5-F)
4. Secure new Control Panel (5-F) with Screws (5-E)
5. Connect the Control Cable (5-D) to Control Panel (5-F)
6. Secure top and bottom Control Panel Cover (5-B, C) with Screws (5-A)
7. Check all Control Panel functions: indication, drive, brake and speed control

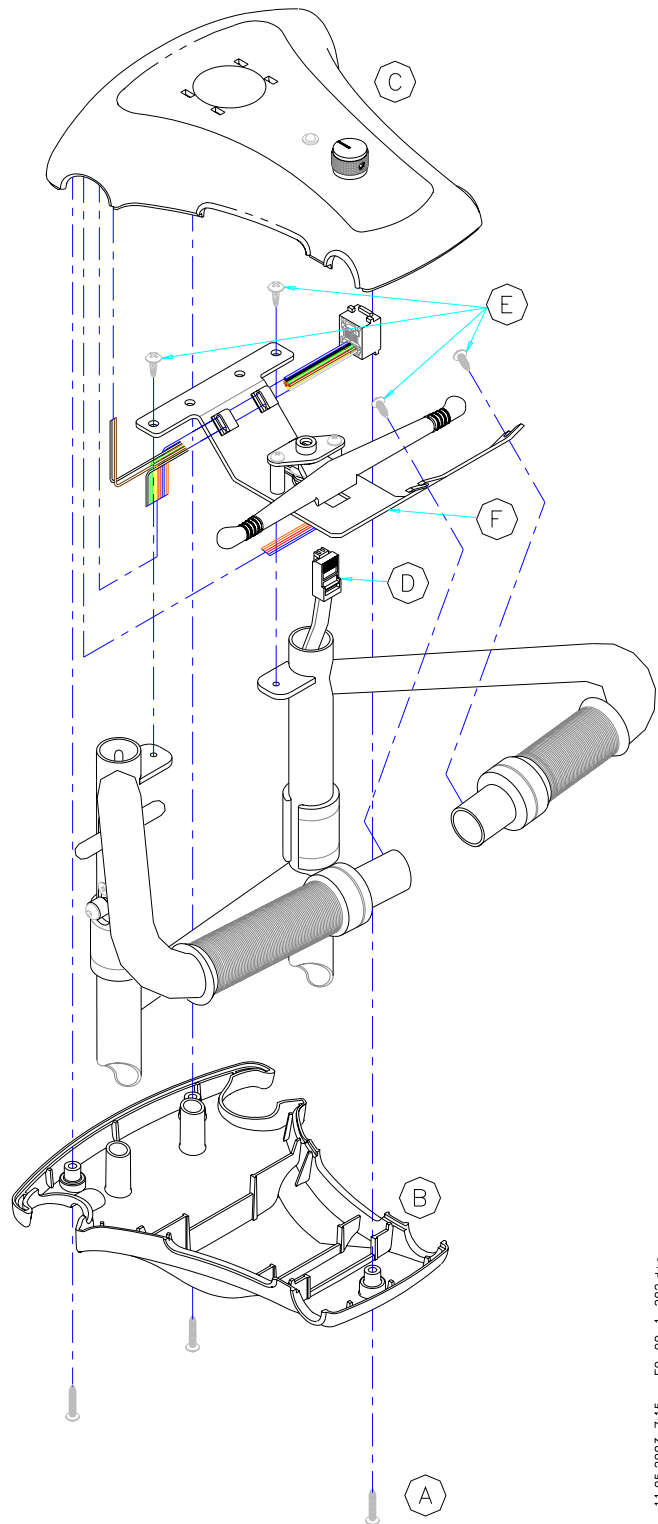


Figure 5

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3.2 Handgrip pair

Kit number E0-00-1-070

Tools:

Silicone spray

Phillips #2 Screwdriver

1. Remove Control Panel Assembly, see instructions 3.1
2. Open Screws (6-A) and remove Control Panel Bottom Cover (6-B)

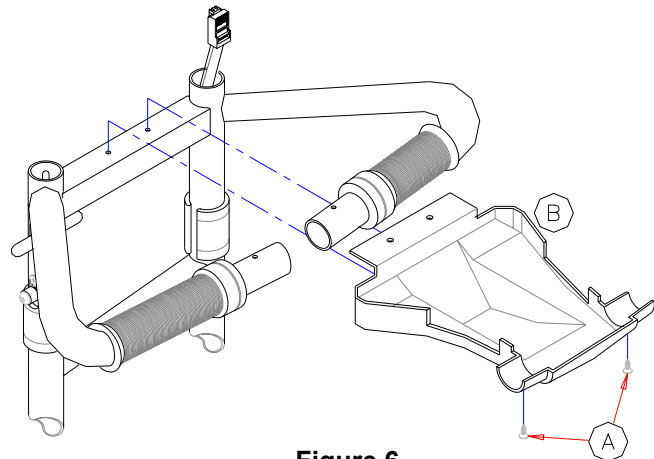


Figure 6

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3. Remove the Handgrips, (7-A)
4. Spray Handlebars (7-B) of the Column Frame and inside of the new Handgrips **lightly** with Silicone Spray and push them onto the Column Frame
5. Reassemble Control Panel Bottom Cover and Control Panel Assembly
6. Push the Handgrips back over both Covers

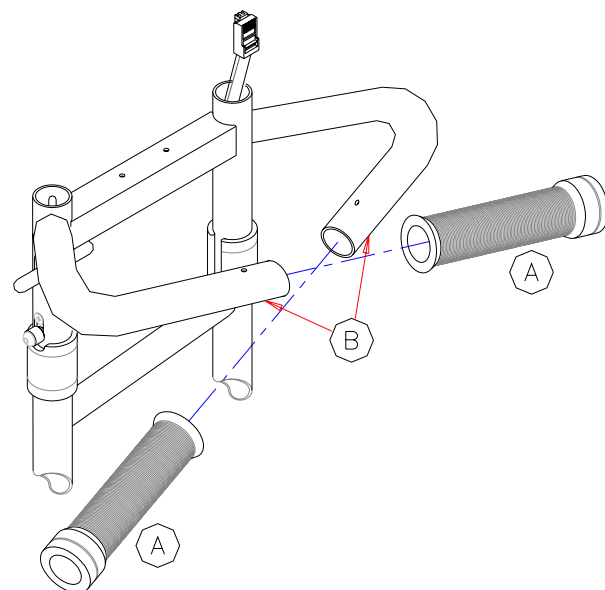


Figure 7

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NOTE: Check that Handgrips do not slide off of Covers easily – this can cause a safety hazard if control lever gets caught under Handgrip edge. Remove excess silicon if needed.

3.3 Controller Cover

Kit Number E0-00-1-034

Tools:

Phillips #2 Screwdriver

1. Remove Screws (8-A) at the top and bottom of the Controller Cover (8-B) and remove Cover
2. Disconnect Connector (8-C) from Interface Circuit Board (8-D)
3. Check that the solder tabs of the Free-wheel Switch on new Cover are bent apart
4. Insert Connector of new Cover (8-C) to Interface Circuit Board
5. Secure the Cover on the Column

NOTE: Ensure that the Power Cable is routed under the Controller (see Figure 13) and that it will not be pinched when closing and securing the Cover

6. Check drive, brake and freewheel operation

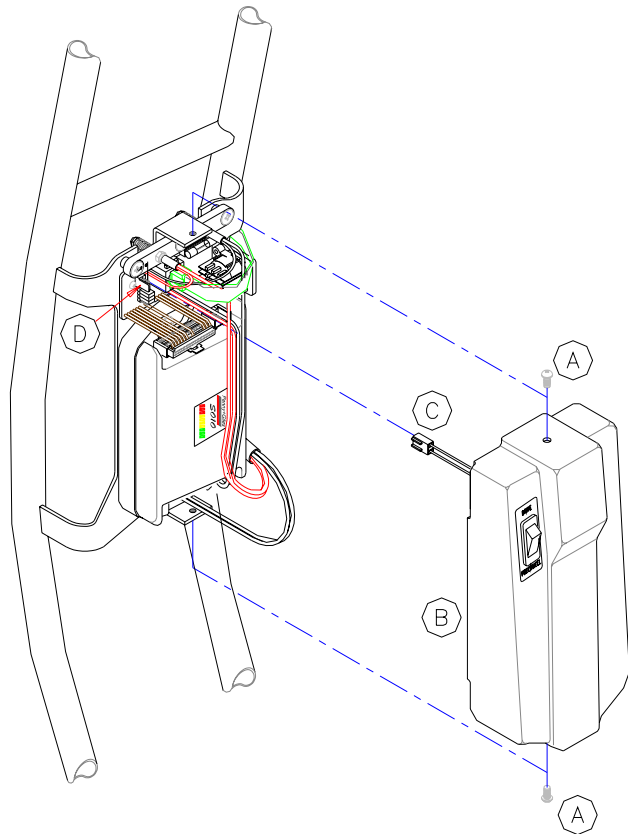


Figure 8

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3.4 Controller

Kit Number E0-00-1-032 (Solo Controller) Figure 9

Kit Number E0-00-1-115 (S-Drive Controller) Figure 10

Tools:

Short Phillips #2 Screwdriver

Pliers

REMARK: The S-Drive controller can be fitted on a unit that originally was issued with a Solo controller; this will require a new Interface Circuit Board, E0-00-1-116

1. Remove Controller Cover, see instruction 3.3
2. Detach wiring from Controller (9a-A)
3. Remove Controller (9a-A) by unscrewing Screws (9a-B)
4. Secure new Controller to Column Frame
5. Attach Wires to Controller (Fig. 6b): from Battery Contacts Assembly, the red wire (A) to "B+" tab (B), the black (C) to "B-" tab (D); from Interface Circuit Board insert 11-pin connector into top socket P2 (E); the two white wires (F) to the white capped cables (G) from Power Cable; from Power Cable the #1 wire to "M+" tab (H), the #2 to "M-" tab (J)
6. Secure Controller Cover to Column Frame
7. Check drive, brake and freewheel operation

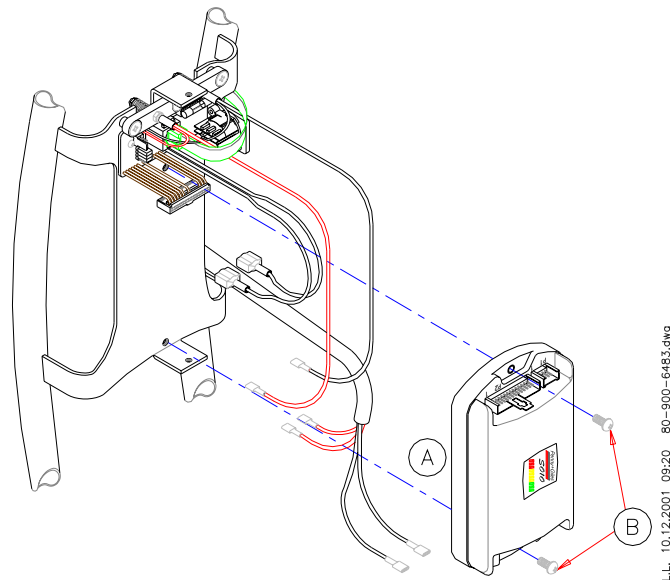


Figure 9a



Figure 9b

Kit Number E0-00-1-115 (S-Drive Controller)

Tools:

Phillips #2 Screwdriver

Pliers

REMARK: The S-Drive controller can be fitted on a unit that originally was issued with a Solo controller; this will require a new Interface Circuit Board, E0-00-1-116

1. Remove Controller Cover, see instruction 3.3
2. Detach wiring from Controller (10a-A)
3. Remove Controller (10a-A) by unscrewing Screws (10a-B)
4. Secure new Controller to Column Frame with Screws (10b-A)
5. Attach Wires to Controller: from Battery Contacts Assembly (E): the red wire to "B+" tab, the black to "B-" tab; the Connector from the Interface Circuit Board (B); the two white wires (C) to the white and green/yellow cables from Power Cable (C); from Power Cable (D) the red wire to "M+" tab, the black to "M-" tab
6. Secure Controller Cover to Column Frame, ensure that no wires will be pinched or damaged by the Cover or the Screws
7. Check drive, brake and freewheel operation

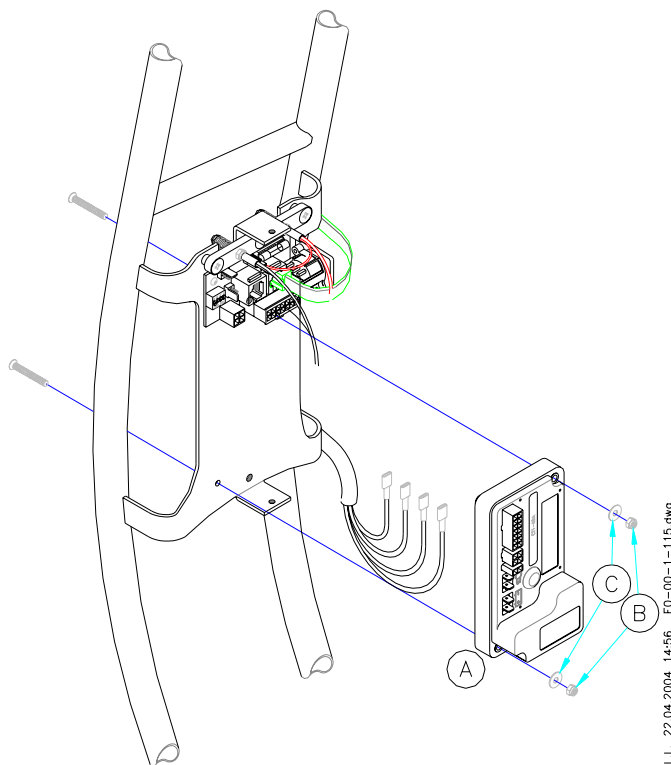


Figure 10a

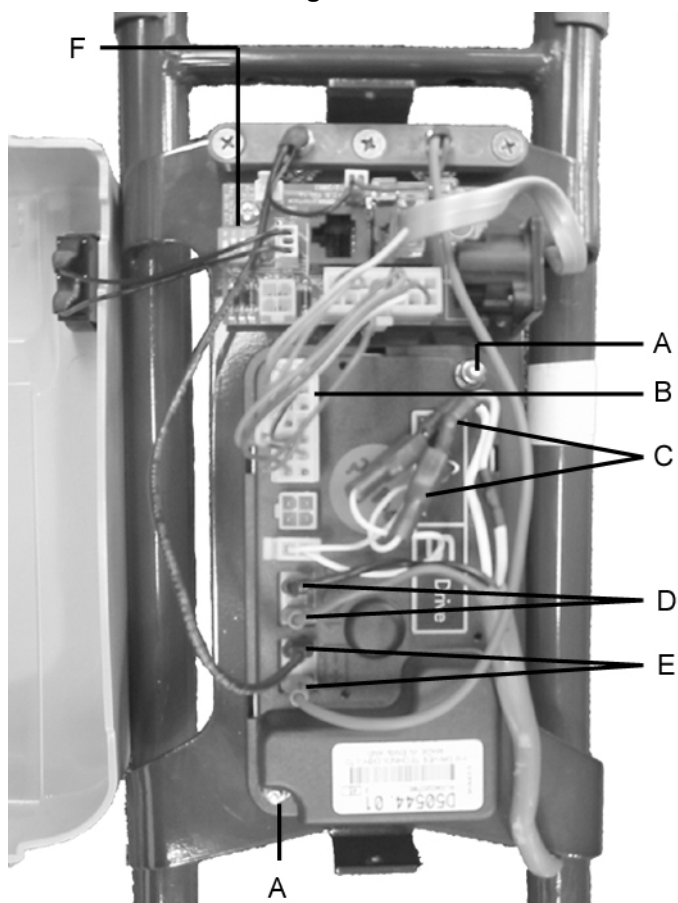


Figure 10b

3.5 Battery Contacts

Kit number E0-00-1-059

Tools:

Phillips #2 Screwdriver

1. Remove Controller Cover, see instruction 3.4
2. Disconnect wiring to Controller (11-A) and Interface Circuit Board (11-B)
3. Unscrew Screws (11-C) and remove Battery Contacts Assembly (11-D)
4. Secure new Battery Contacts Assembly (11-D) with Screws (11-C)
5. Connect Wiring (11-A) to Controller (red to "B+" tab, black to "B-" tab), Connector (11-B) onto Interface Circuit Board
6. Reassemble Controller Cover, see instruction 3.4
7. Check drive, brake and freewheel operation

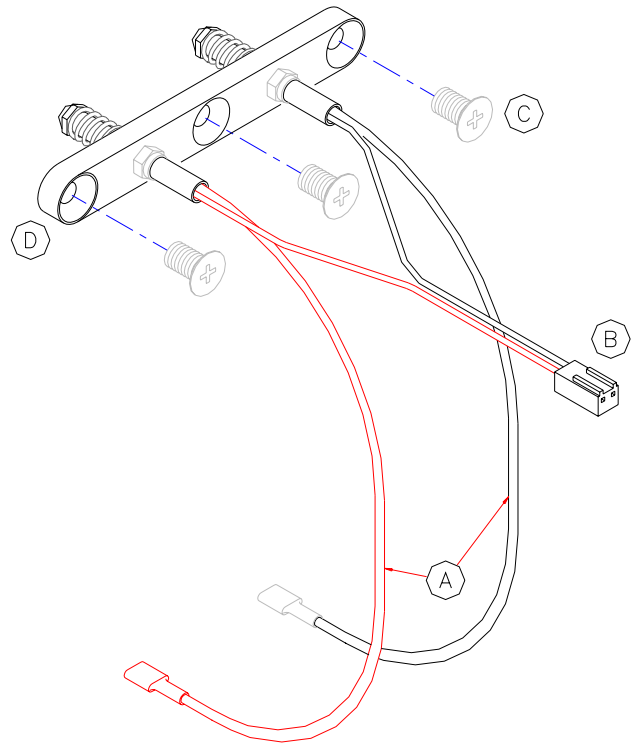


Figure 11

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3.6 Interface Circuit Board

Kit number E0-00-1-058 (for Solo controller) (for serial # with 7 digits)

Kit Number E0-00-1-116 (for S-Drive controller) (for serial # with 11 or 13 digits)

Tools:

Phillips #1 Screwdriver

Phillips #2 Screwdriver

1. Remove Controller Cover, see instruction 3.3

Solo:

2. Disconnect Control Cable (12a-A), wiring to Controller (Fig. 9a-B), Contact Pins Assembly (12a-C) and Power Cable (12a-D)
3. Unscrew 3 Screws (12a-E) and remove Interface Circuit Board (12a-F)
4. Secure new Interface Circuit Board (12a-F) with Screws (12a-E)
5. Connect Control Cable (12a-A), wiring to Controller (12a-B), Contact Pins Assembly (12a-C) and Power Cable (12a-D)

S-Drive:

2. Disconnect Control Cable (12b-A), wiring to Controller (Fig. 9b-B) and Contact Pins Assembly (12b-C)
3. Unscrew 3 Screws (12b-D) and remove Interface Circuit Board (12b-E)
4. Secure new Interface Circuit Board (12b-E) with Screws (12b-D)
5. Connect Control Cable (12b-A), wiring to Controller (12b-B) and Contact Pins Assembly (12b-C)
6. Reassemble Controller Cover
7. Check drive, brake and freewheel operation

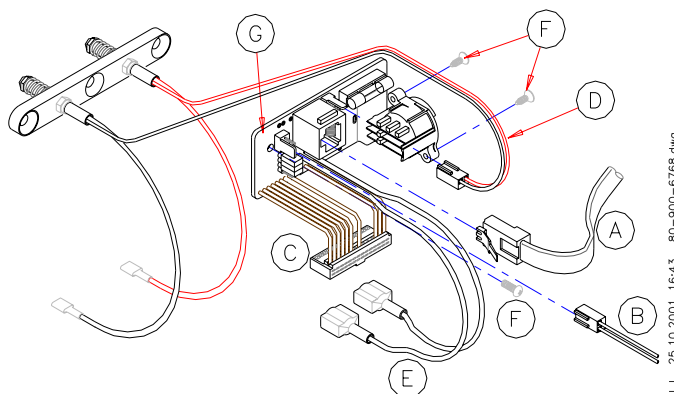


Figure 12a

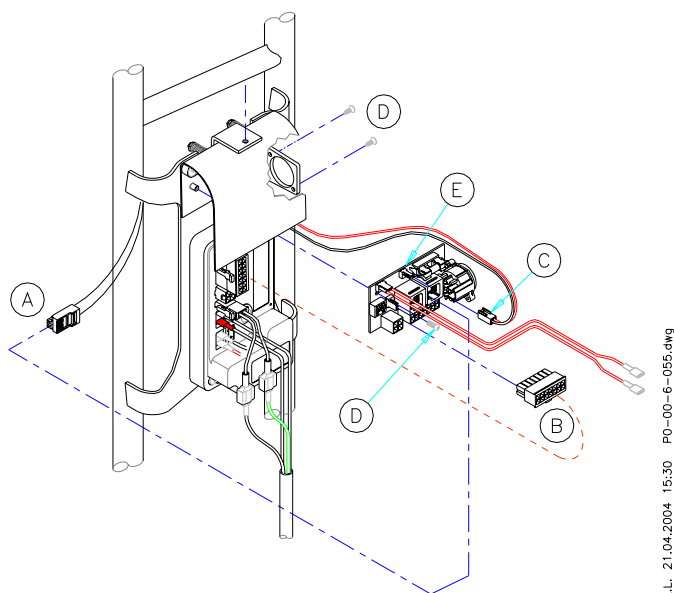


Figure 12b

3.7 Control Cable

Kit number E0-00-1-054

Tools:

Phillips #2 Screwdriver

1. Open Control Panel Cover, see instruction 3.1
2. Open Controller Cover, see instruction 3.4
3. Disconnect Control Cable from Control Panel (5-C) and Interface Circuit Board (12-A)
4. Remove Control Cable
5. Insert new Control Cable
6. Connect Control Cable to Control Panel and Interface Circuit Board
7. Reassemble Controller Cover and Control Panel Cover, see instructions 3.1 and 3.4
8. Check all Control Panel and Controller functions: drive, brake, speed and indication

3.8 Motor Cover

Kit Number E0-00-1-082 (for models with front wheel drive, serial # 7 digits)

Kit Number E0-00-1-099 (for models with front wheel drive, serial # 11 digits)

Kit Number E0-00-1-721 (for models with rear wheel drive)

Tools:

Phillips Screwdriver 2

1. Unscrew Screw (13-A) and remove Cover (13-B)

2. Note the motor wire routing and maintain it in position

NOTE: If force is needed to fit Cover, check the wire routing and ensure that it will not be pinched

3. Secure new Cover (13-B) with Screw (13-A)

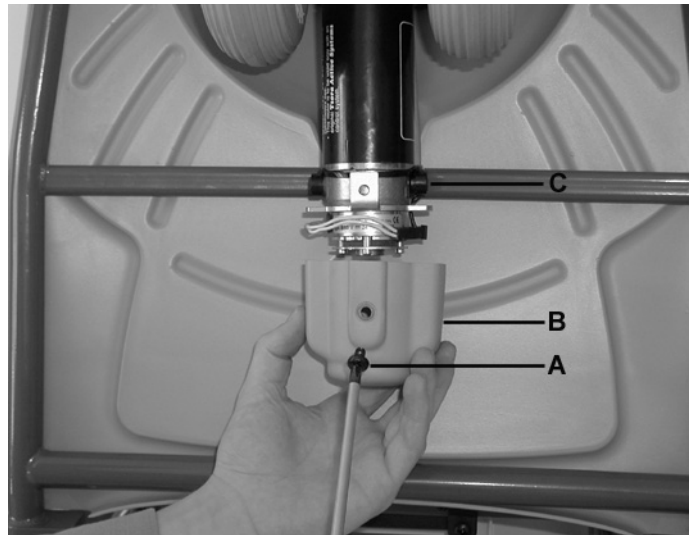


Figure 13

Kit Number ES-00-1-721 (for models with rear wheel drive)

Tools:

Phillips #2 Screwdriver

Wrench 10 mm

Allen Key 4 mm

Drill bit 3.7 mm

Some models have the Motor Cover fitted with velcro instead of screws.

1. Open Screws (14-A) and remove Free-wheel Lever (14-B)
2. Open on both sides Screw (15-A) and Nut (15-B) and fold Seat Support forward
3. Open Screws (16-C) and remove Cover
4. Place new Cover (16-A) over motor
5. Ensure that Cover (16-A) is aligned with Motor and Frame (16-B)
6. Secure Cover (16-A) with Screws
7. Replace Seat Support and secure with Screw (15-A) and Nut (15-B)
8. Replace Freewheel Lever (14-B) and secure with Screws (14-A)

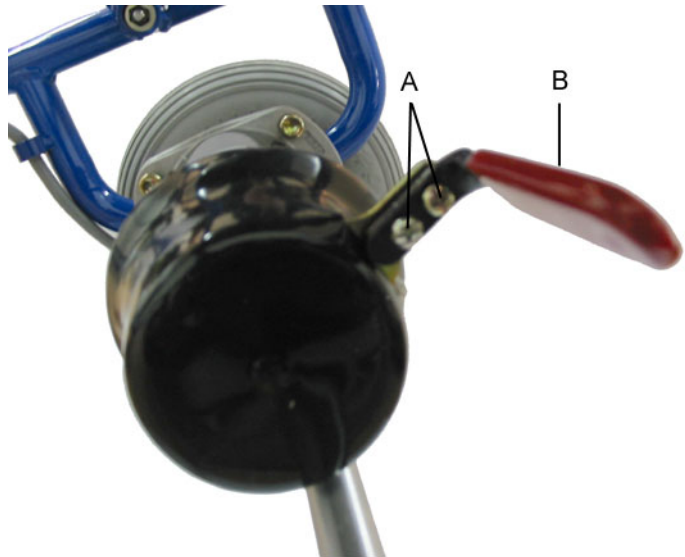


Figure 14

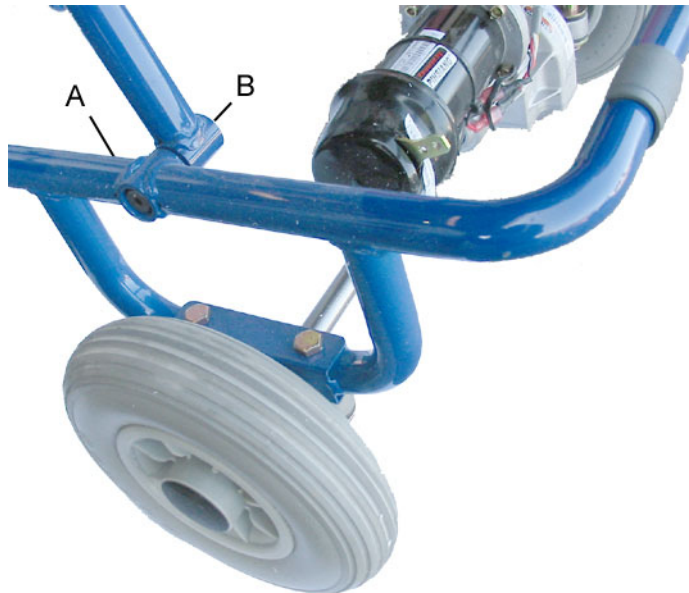


Figure 15

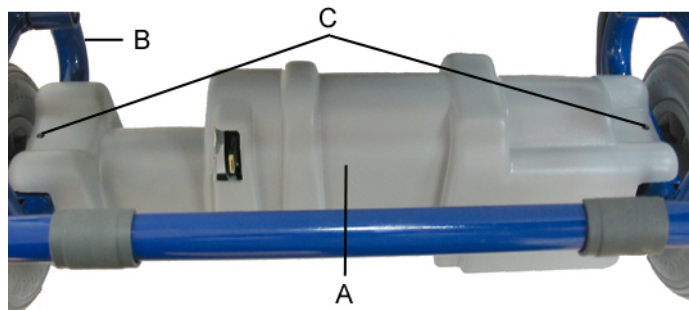


Figure 16

3.9 Motor Brushes

Kit Number E0-00-1-037 (for serial # with 7 digits)

Tools:

Phillips #2 Screwdriver

Flat Blade Screwdriver

Refer to Figure 12

1. Remove the Motor End Cover, see instruction 3.8
2. Remove the plastic Brush Cap (12-C) and pull the Brush (17-A) gently from its housing
3. Remove Power Cable wire (17-B)
4. Insert the new Brush carefully into its housing and secure with Brush Cap (12-C)
NOTE: Ensure that the Brush is fully inserted freely and smoothly and that the spring is not caught in the housing
5. Connect Power Cable wire (17-B) to contact tab (17-A)
6. Bend contact tab towards motor
7. Note the motor wire routing and maintain it in position.
8. Secure Motor Cover, see instruction 3.9
9. Check drive and brake operation

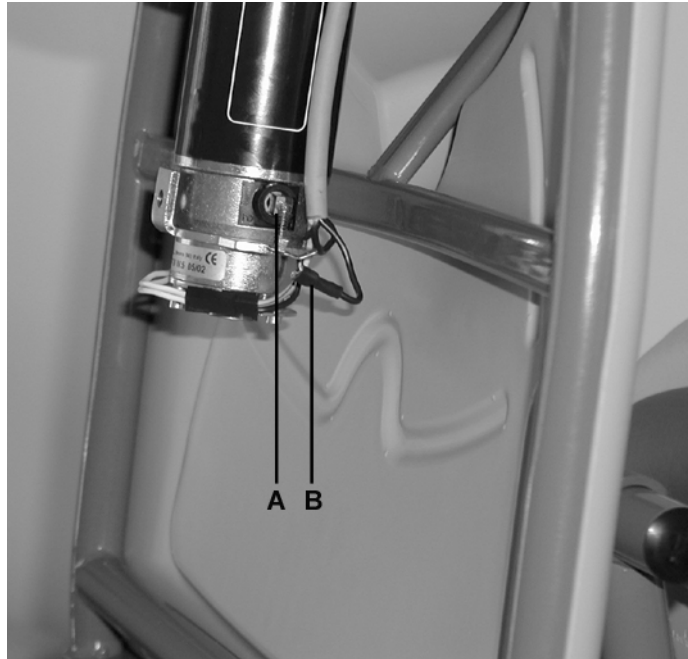


Figure 17

3.10 Power Cable to Motor

Kit Number E0-00-1-093 (for models with front wheel drive)

Kit Number E0-00-1-702 (for models with rear wheel drive)

Tools:

Phillips #2 Screwdriver

Pliers

Cutter

Cable Tie Tensioning Tool

The wheels MAY be removed to facilitate easier access for the replacement of parts, see instruction 3.11

For instructional purposes the Footrest Platform has been removed in figure 14.

1. Remove the Motor Cover, see instruction 3.8
2. Remove Cable Ties (18-A) from Motor
3. Remove the Wires from the Terminals (18-B) and Brakes (18-C) on the Motor
4. Remove Controller Cover, see instruction 3.3
5. Detach the Wires from the Controller (19-A) and Interface Circuit Board (19-B)
6. Carefully pull the Wire Assembly out of the Column Frame
7. Thread the new Wire Assembly from the Controller-end into the hole in the Column Frame out of tube and under the Screw (18-D)
8. Connect the #1 long Wire end to the positive/red colored Terminal, the #2 short Wire end to the negative/black colored Terminal, the #3 and green wire to the white wires from the electromagnetic Brake
9. Secure the Cable to the Motor with the two Cable Ties (22-A) and trim ends
10. Secure the Motor Cover over the end of the Motor, see instruction 3.8

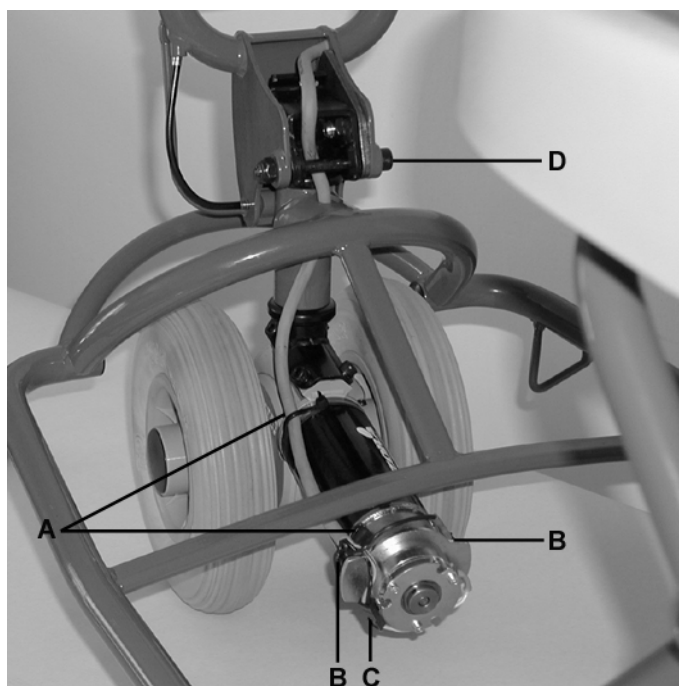


Figure 18

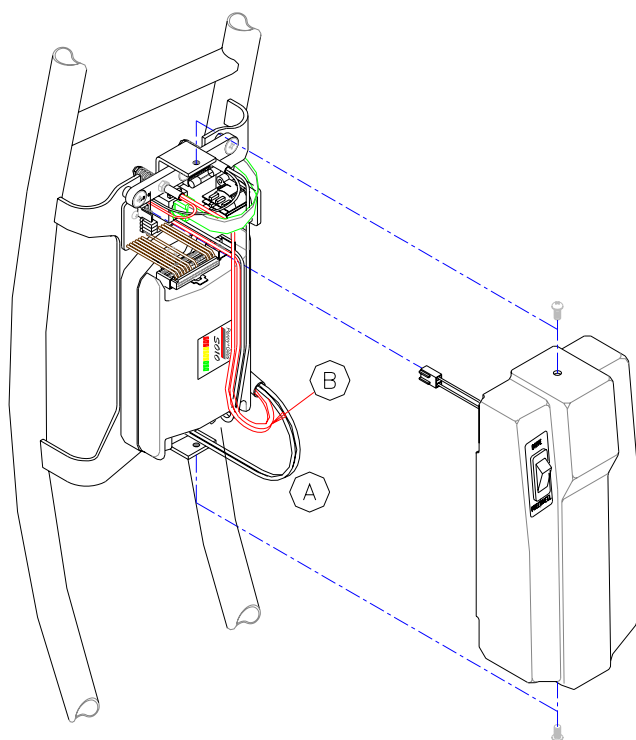


Figure 19

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NOTE: If force is needed to fit Motor Cover, check the wire routing and ensure that it will not be pinched

11. Attach from the Power Cable the black insulated #1 Wire End to "M+" tab, the red insulated #2 to "M-" tab on Controller and the two white insulated Wire Ends to the Wires from Interface Circuit Board
12. Secure Controller Cover to the Frame, ensure that no wires will be pinched or damaged by the Cover or the Screws
13. Check drive, brake and freewheel function

Kit Number E0-00-1-702 (for models with rear wheel drive)

Tools:

Phillips #2 Screwdriver

Pliers

Cutter

Cable Tie Tensioning Tool

The wheels MAY be removed to facilitate easier access for the replacement of parts, see instruction 3.11

1. Remove the Motor Cover, see instruction 3.8
2. Disconnect Power Cable from Motor, see instruction
3. Disconnect Power Cable from Controller, see instruction
4. Carefully pull the Power Cable out of the Column Frame and the Cable Guides, Fig.
5. Thread new Power Cable through Cable Guides
6. Thread the new Wire Assembly from the Controller-end into the hole in the Column Frame out of tube and under the Screw (14-D)
7. Connect Power Cable to Motor, see instruction
8. Replace Motor cover, see instruction
9. Connect Power Cable to Controller, see instruction
10. Check drive, brake and freewheel function

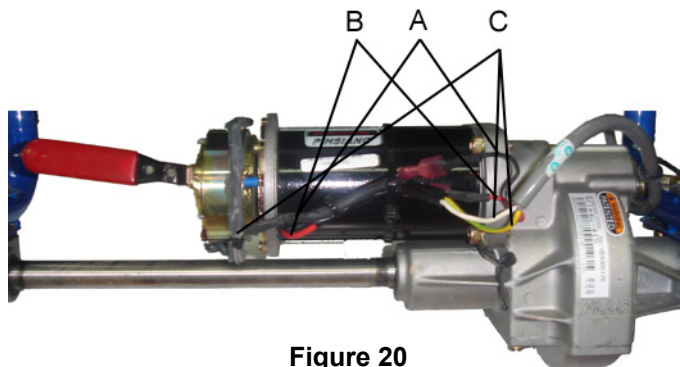


Figure 20



Figure 21

3.12 Gear Motor

Kit Number E0-00-1-094 (for models with front wheel drive)

Kit Number E0-00-1-722 (for models with rear wheel drive)

Tools:

Phillips #2 Screwdriver

Allen Key 5 mm

Cable Tie Tensioning Tool

Loctite Adhesive #242 (1312)

1. Remove Front Wheels, see instruction 3.11
2. Remove the Motor End Cover, see instruction 3.8
3. Detach Power Cable from Motor Assembly, see instruction 3.10
4. Remove the Screws (23-A) securing the Motor Assembly to the Motor Holder
5. Apply Loctite to the Screws (23-A) and secure with them the new Motor Assembly to the Motor Holder
6. Solder and attach Power Cable to Motor Assembly, see instruction 3.10
7. Secure Motor End Cover, see instruction 3.8
8. Secure Front Wheels, see instruction 3.11

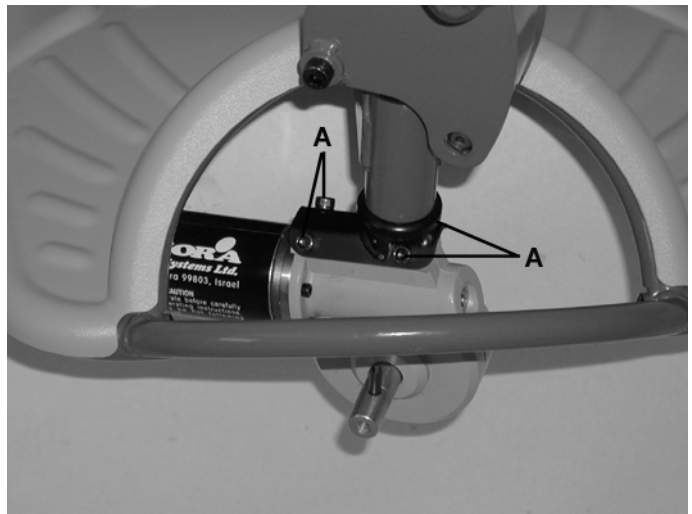


Figure 23

Kit number E0-00-1-722 (for models with rear wheel drive)

Tools:

Phillips #2 Screwdriver

Allen Key 5 mm

Cable Tie Tensioning Tool

Loctite Adhesive #242 (1312)

1. Remove Motor Cover, see instruction 3.11
2. Disconnect Power Cable from Motor, see instruction
3. Open Nuts (24-A)
4. Remove Washer (24-B), Motor (24-E) and Spacers (24-C)
5. Place new Motor (24-E) on Screws (24-D)
NOTE: Ensure that one Spacer (24-C) sits between Motor (24-E) and Frame
6. Place Spacers (24-C) and Washers (24-B)
7. Secure with Nuts (24-A)
8. Connect Power Cable to Motor, see instruction
9. Place Motor Cover, see instruction
10. Check drive, brake and freewheel function

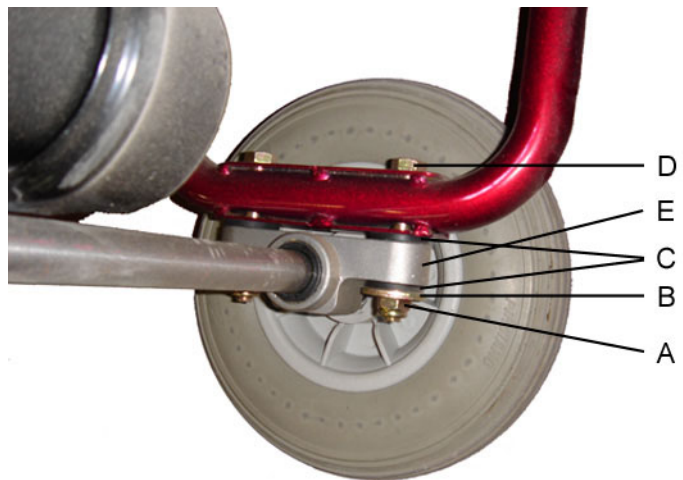


Figure 24

3.13 Steering Column Stem

Kit Number E0-00-1-122

Tools:

Allen Key 6 mm

Open End Wrench 13 mm

1. Remove Nylock Nut (25-A) and Screw (25-B)

2. Carefully lift Steering Column from Stem as shown in Figure 26 and rest it alongside on the Footrest Platform without detaching the Power Cable

NOTE: Ensure that the Column Release Pin is withdrawn before removing and replacing the Steering Column

3. Unscrew Screw (25-C) and lift the Stem (27-A) out of the Sleeve (27-B)

4. Place new Stem (27-B) in Sleeve (27-B), notice the correct position of the Truncated Nut (27-C)

5. Tighten Screw (25-C)

6. Apply some Lubricant on the inside of the connecting plates of the Steering Column and slide it over the Stem, aligning the holes in the connecting plates and the Stem

7. Insert Screw (25-B) and tighten with Nylock Nut (25-A)

NOTE: Ensure that the Power Cable runs behind the Screw, as shown in Figure 18

NOTE: Ensure not to over-tighten the Nut in order to allow smooth movement when folding and to prevent paint-damage on the inside of the connecting plates

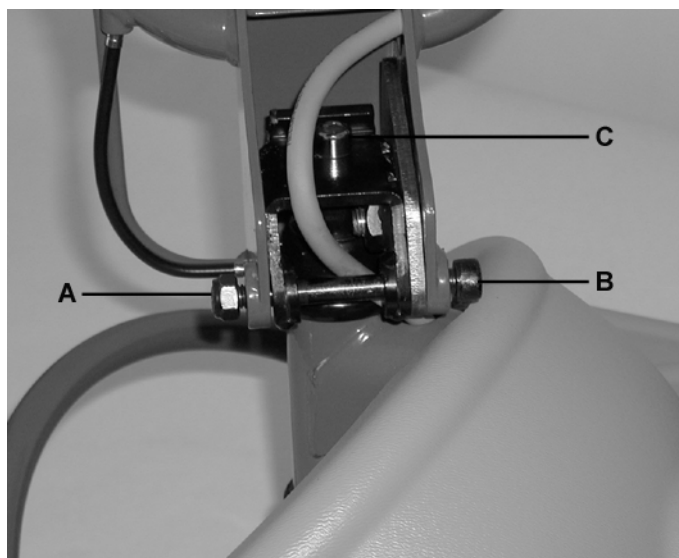


Figure 25



Figure 26

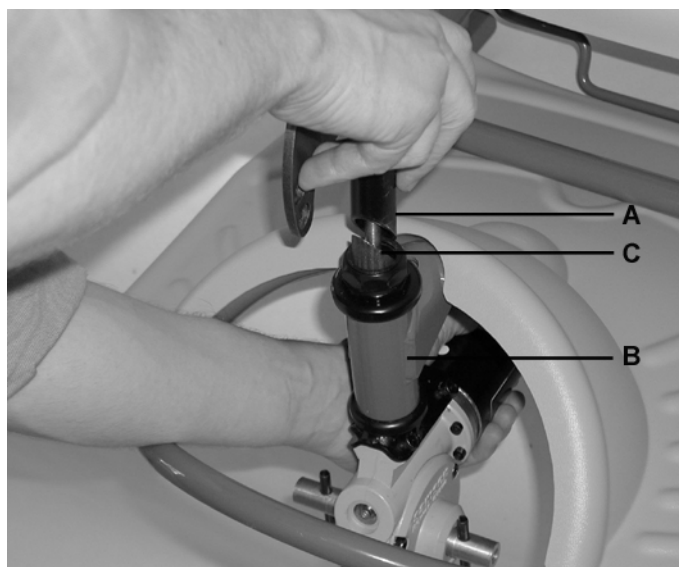


Figure 27

3.14 Upper and Lower Bearings

Kit Number E0-00-1-123

Tools:

Allen Key 6 mm

Wrench, open end 13 mm

Wrench, open end 32 mm

1. Remove Steering Column and Stem, see instruction 3.13
2. Unscrew the Counter Screw (28-A), remove the Spacer (28-B) and unscrew the Upper Bearing Housing (28-C)
3. Remove the Upper Bearing
4. Remove the Motor Holder from the Sleeve and the Lower Bearing and the Spacer from the Motor Holder
5. Place new Spacer and Lower Bearing on the Motor Holder and slide it in the Sleeve
6. Place new Upper Bearing on top of it and secure it with new Upper Bearing Housing (28-C)
NOTE: Do not use a wrench to tighten the Housing but do it by hand
7. Place new Spacer (28-B) and secure the assembly with Counter Screw (28-A)
NOTE: Do not over-tighten Counter Screw
8. Check free rotation of the Motor Holder
9. Replace Steering Column and Stem, see instruction 3.13



Figure 28

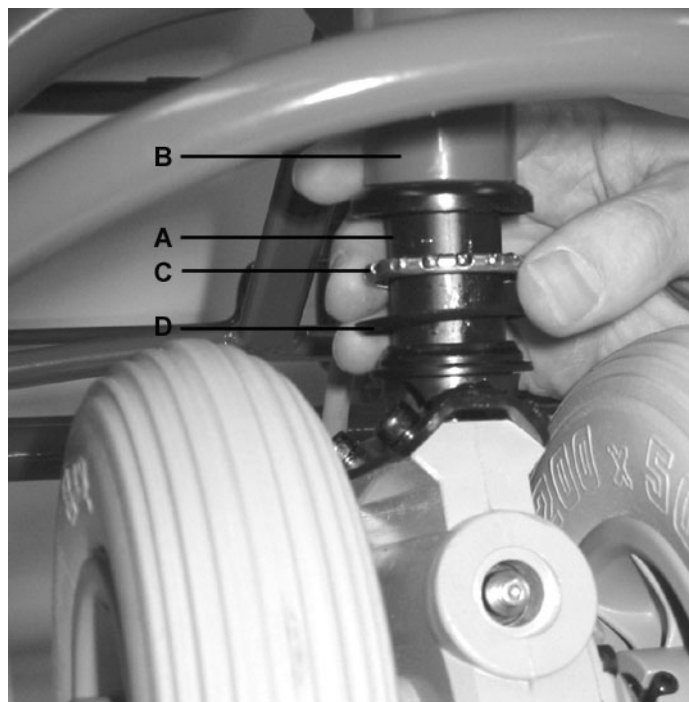


Figure 29

3.15 Column Release Cable Kit

Kit Number E0-00-1-080

Tools:

Phillips #2 Screwdriver

Wrench, open end 8 mm

Allen key 3 mm

Wire Cutter

Pliers

Crimp Tool

Loctite Adhesive # 496 (3854)

Light grease/lubricant

1. Remove Control Panel Cover, see instruction 3.1
2. Remove Cable End Cone, Vinyl Caps and Screws (30x) and open Cable Locks
3. Slide Release Bushing out of Column Frame and remove Cable with Lock Pin and Spring
4. Thread Column Lock Pin (303-A) and Spring (303-B) onto the Column Lock Pin Cable (303-C)
5. Thread the Cable through the large hole in Connecting Plate (303-D), Column Lock Pin Housing (303-E) and the small hole in Connecting Plate (303-F)
6. Apply some lubricant to Lock Pin (303-A)
7. Thread the Cable Guide (303-G) onto the Cable and thread the cable into the Cable Guide Adjustable Stop (303-H) and through the Tube of Column Frame (303-J)
8. Thread the Release Bushing (303-K) with the single hole down onto the Cable making sure that the Cable passes through the two Cable Locks (303-L). Bring the Release Bushing (303-K) to its approximate position and lightly secure it with the Set Screws (303-P)

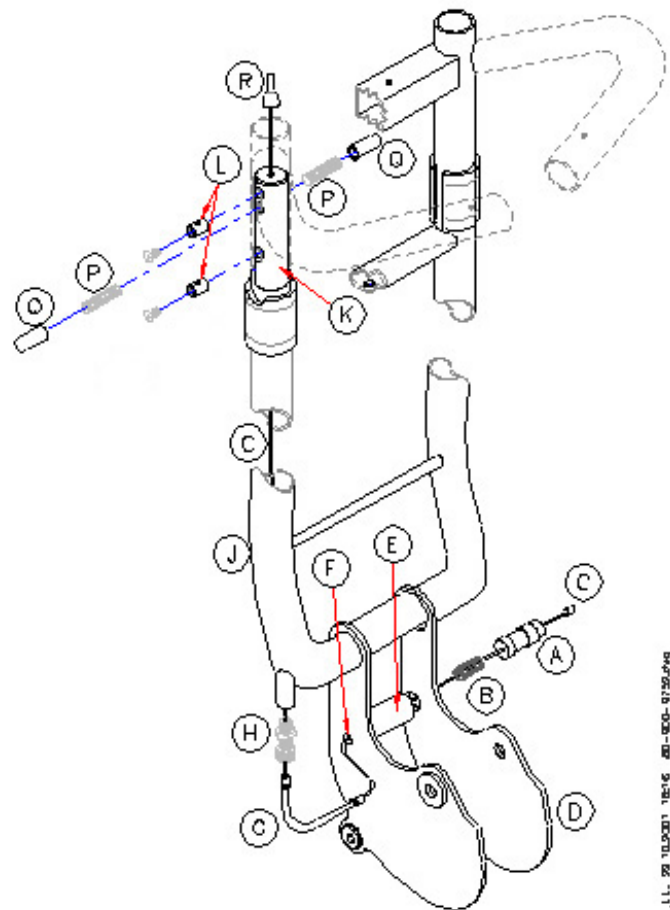


Figure 30

9. Take up the slack in the Cable (303-C) so that the end of the Column Lock Pin (303-A) is flush with the outside of Connecting Plate (303-D)
10. Release one of the two Set Screws (303-P) and bring the Release Bushing (303-K) to its final position, Set Screws (303-P) reaching the bottom of slot in Column Frame Tube (303-J).
11. Lift the Cable by the top of it, not by the Set Screws, until the lower Cable Lock is flush with the lower hole and tighten the two Cable Locks (303-L)
12. Tighten the two Set Screws (303-P) and slide the two Vinyl Caps (303-Q) onto them.
NOTE: do not over-tighten the Screws (303-P) against the Cable.
13. Trim Cable to approximately 25 mm. (1") beyond the end of the Column Frame Tube. Crimp the Cable End Cone (303-R) onto the end of the Cable.
14. Test the function of the Column Lock Pin Assembly and adjust as necessary.

3.16 Black Vinyl Cap

Kit Number E0-00-1-078

Tools:

Screwdriver and/or

Pliers

Refer to Figure 30

1. Pry Cap (30-Q) off with Screwdriver or pair of Pliers; be careful not to chip the paint
2. Place new Cap, make sure it covers the whole Set Screw (30-P)

3.17 Battery Case / Battery Replacement

Kit Number E0-00-1-101

Tools:

Phillips #2 Screwdriver

Pliers

1. Remove Screws (31-A) from Battery Case and remove Cover (31-B)
2. Remove Batteries (31-C) from Case and detach Wires (31-D/E)
3. Place Batteries in new Case (-H) and attach red Wire (31-D) to positive/red marked Tab (31-F) and black Wire (31-E) to negative/black marked Tab (31-G)
NOTE: It is recommended to attach first the appropriate Wires to the Battery closest to the base of the Case and then insert it fully into the case; repeat in same order for Battery closest to Handlebar
4. Ensure that no Wires are caught under the Batteries
5. Secure Battery Cover (31-B) to Case with Screws (31-A)

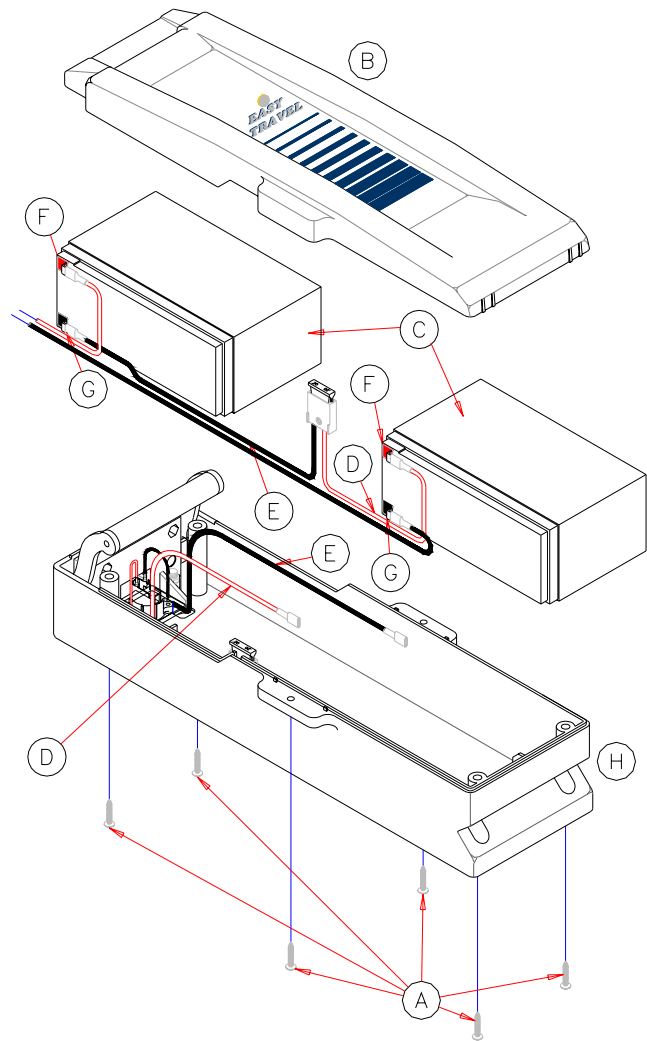


Figure 31

L.L. 23.10.2001 07:56 80-900-9764.dwg

3.18 Battery Cover

Kit Number E0-00-1-102

Tools:

Phillips #2 Screwdriver

1. Remove Screws (31-A) and Battery Cover (31-B)
2. Secure new Cover (31-B) to Case (31-H) with Screws (31-A)

3.19 Seat Assembly

Kit Number E0-00-1-116

Tools:

Phillips #2 Screwdriver

Loctite Adhesive # 242 (1312)

1. Remove the four Screws (32-A) holding the Seat to the Seat Guide Brackets (32-B)
2. Remove the two Screws (32-D) holding the Seat (32-F) to the "U" shaped Seat Attachment Bracket (32-E), the Sleeves and Seat (32-F)
3. Attach the replacement Seat (32-F) to the Bracket (32-E). Place the Sleeves between the holes in the Bracket (32-E) and tighten the two Screws (32-D) until any lash is removed. Over tightening may cause friction on the frame tube resulting in higher folding effort.
4. Place the metal strips (32-C) with the holes aligned to those in the Seat and place the Seat Guide Brackets (32-B) over the "U" shaped frame tube as shown in Figure 25
NOTE: Ensure that the longer tab of the Guide Bracket is pointed towards the front, as shown in Figure 25
5. Secure the Guide Brackets (32-B) with the four Screws (32-A)

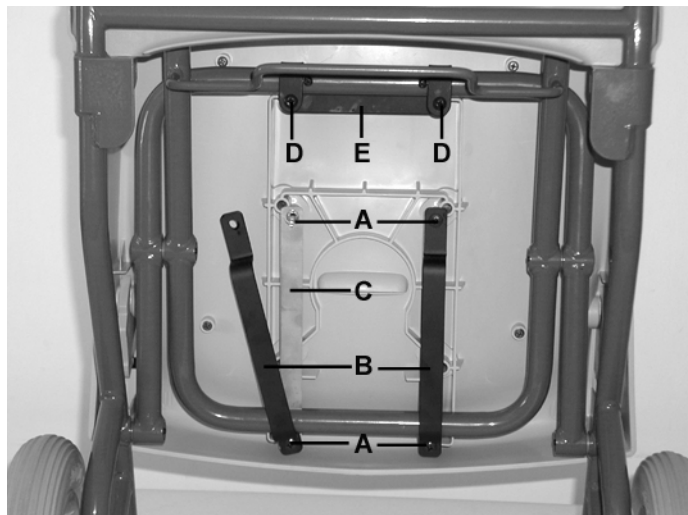


Figure 32

3.20 Seat Back Pad

Kit Number E0-00-1-060 (for serial # with 7 digits)

Kit Number E0-00-1-201 (for serial # with 1 or 13 digits)

Tools:

Phillips #2 Screwdriver

1. Remove the Screw Covers (33-A)
2. Remove the Screws (33-B) and Back Pad (33-C)
3. Align the tubes (33-D) of the Back Pad with the holes in the Seat Back (33-E)
4. Secure Back Pad with Screws (33-B)
5. Place Screw Covers (33-A)

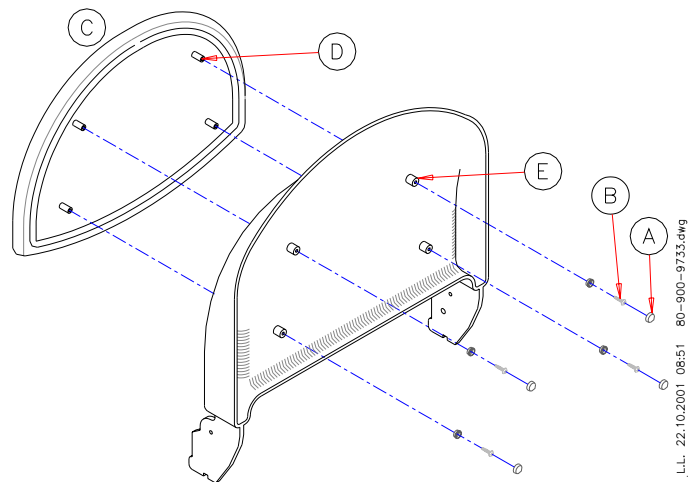


Figure 33

3.21 Seat Bottom Pad

Kit Number E0-00-1-062 (for serial # with 7 digits)

Kit Number E0-00-1-203 (for serial # with 1 or 13 digits)

Tools:

Phillips #2 Screwdriver

1. Remove the Screws (34-A) and Bottom Pad (34-B)
2. Align the tubes (34-C) of the Bottom Pad with the holes in the Seat Bottom (34-D)
3. Secure Bottom Pad (34-B) with Screws (34-A)

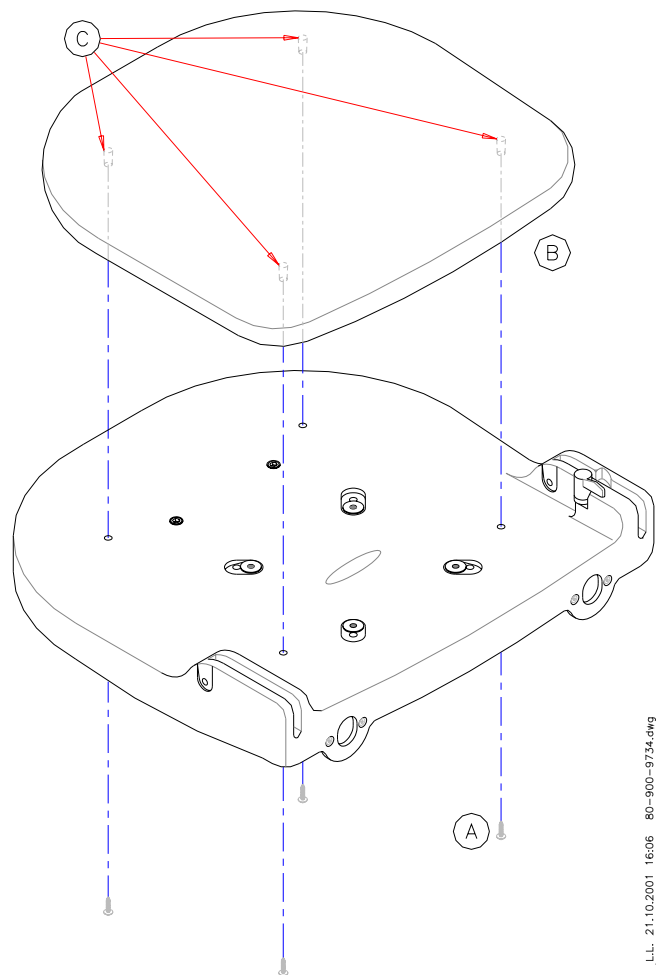


Figure 34

L.L. 21.10.2001 16:06 80-900-9734.dwg

3.22 Seat Backrest Lock kit

Kit Number E0-00-1-063 (for serial # with 7 digits)

Tools:

Phillips #2 Screwdriver

1. Remove Screw (35-D), Washer (35-C), Knob (35-B) and Stopping Snib (35-A)
2. Insert new Stopping Snib (35-A) in Seat Bottom
3. Attach Knob (35-B) to Stopping Snib and secure it with Washer (35-C) and Screw (35-D)
4. Check that a some effort is needed to open and close Lock
5. Check opening and closing functions of Lock and Seat

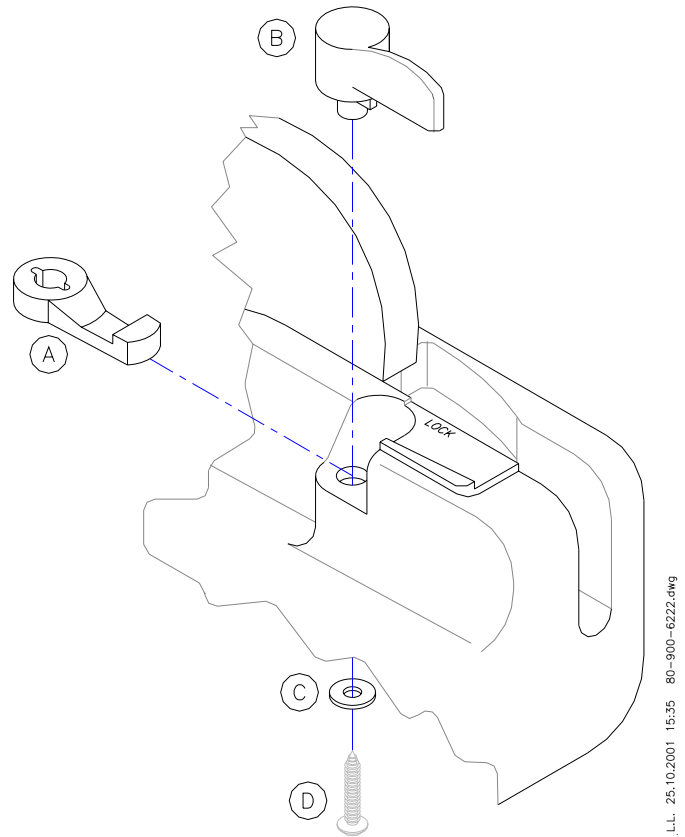


Figure 35

3.23 Seat Attachment Bracket

Kit Number E0-00-1-120

Tools:

Phillips #2 Screwdriver

Loctite Adhesive # 242 (1312)

Refer to Figure 25

1. Remove the two Screws (32-D) holding the Seat (32-F) to the "U" shaped Seat Attachment Bracket (32-E) and the Sleeves
2. Remove the Bracket (32-E)
3. Attach the new Bracket (32-E) to Seat (32-F). Place the Sleeves between the holes in the Bracket (32-E)
4. Apply Loctite to the two Screws (32-D) and tighten them until any lash is removed. Over tightening may cause friction on the frame tube resulting in higher folding effort.

3.24 Seat Guide Brackets

Kit Number E0-00-1-121

Tools:

Phillips #2 Screwdriver

Refer to Figure 25

1. Remove the four Screws (32-A) holding the Seat to the Seat Guide Brackets (32-B)
2. Place the metal strips (32-C) with the holes aligned to those in the Seat and place the Seat Guide Brackets (32-B) over the “U” shaped frame tube as shown in Figure 25

NOTE: Ensure that the longer tab of the Guide Bracket is pointed towards the front, as shown in Figure 25

3. Secure the Guide Brackets (32-B) with the four Screws (32-A)

3.25 Footrest Platform

Kit Number E0-2-30

Tools:

Cleaning detergent

Clamps

1. Remove old Platform (36-A) and any remainders of Adhesive Tape
2. Clean Frame surface (36-B) with a detergent and wipe dry with a clean cloth
3. Remove protective film from Tape sections on the inside of the Platform
4. Secure Platform (36-A) to Frame (36-B) with two clamps
5. Leave for 15 minutes before removing the clamps

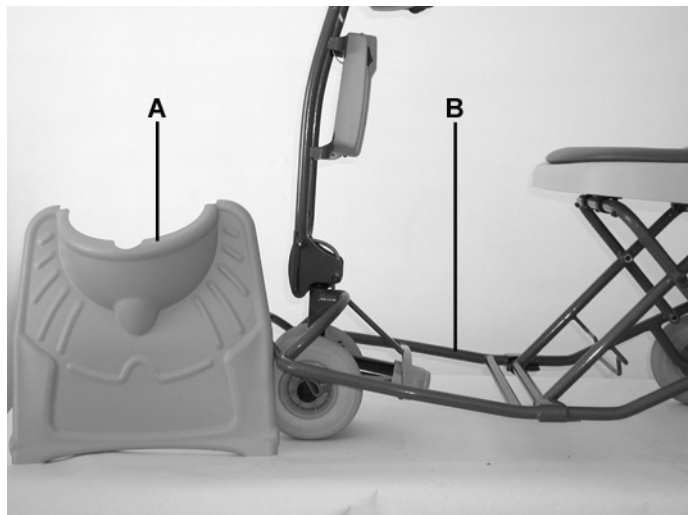


Figure 36

3.26 Rear Wheel Assembly

Kit Number E0-00-1-068

Tools:

Circlip Pliers

Screwdriver

Soft Mallet

Extractor with scratch protection

1. Remove old End Cap (37-C) using a screwdriver. Remove old Circlip (37-B) and Wheel. If needed use an extractor to remove the bearing from the Axle (Figure 38)
2. Place new Wheel (37-A) on Axle of Rear Frame (37-D)
3. Fit new Circlip (37-B) into its groove at the end of the Axle
4. Fit new End Cap (37-C) to the end of the Axle using a mallet
NOTE: Protect the End Cap with rubber or a cloth; direct sharp blows will deform the Cap
5. Ensure that the Wheel rotates freely on the Axle

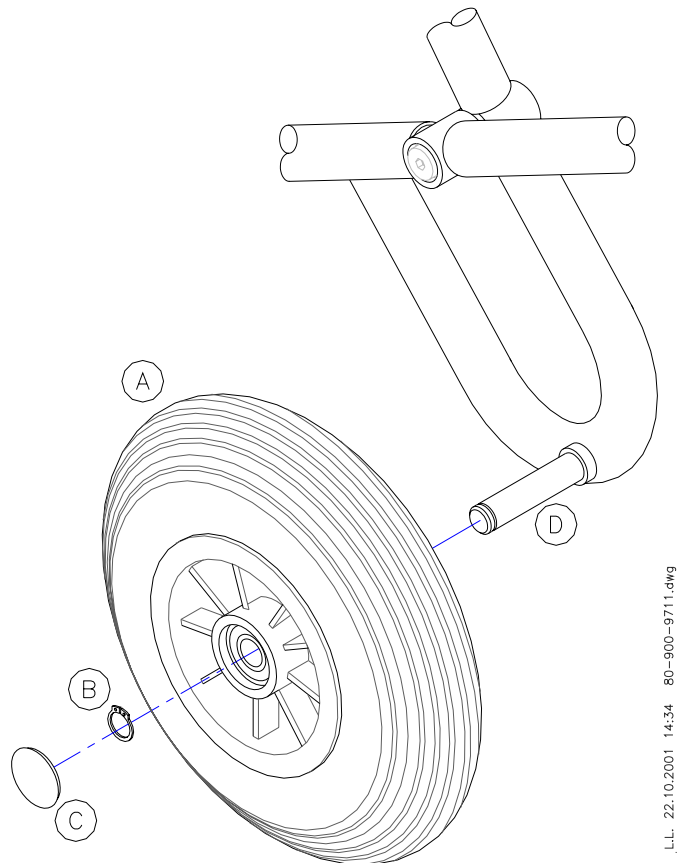


Figure 37

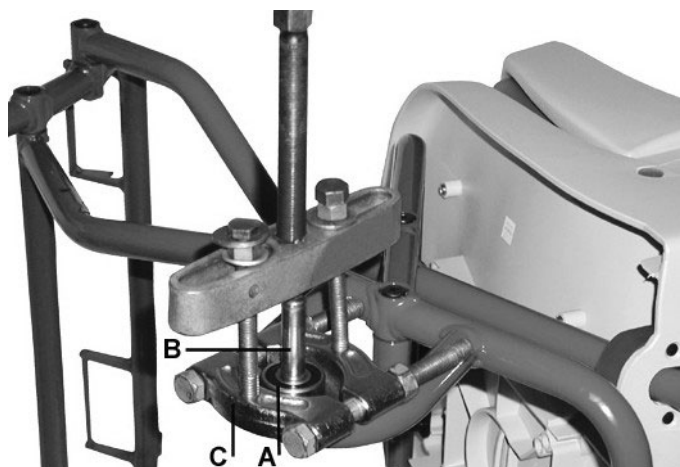


Figure 38

3.27 Flat Cap (front platform)

Kit Number E0-00-1-074

Tools:

Screwdriver and/or

Pliers

Soft Mallet

1. Cover the flat tip of a screwdriver with masking tape or electrical tape to prevent paint damage
2. Remove the old Cap (39-A)
3. Tap the Cap (39-A) gently into the Tube end using a mallet

NOTE: Sharp blows will deform the Cap

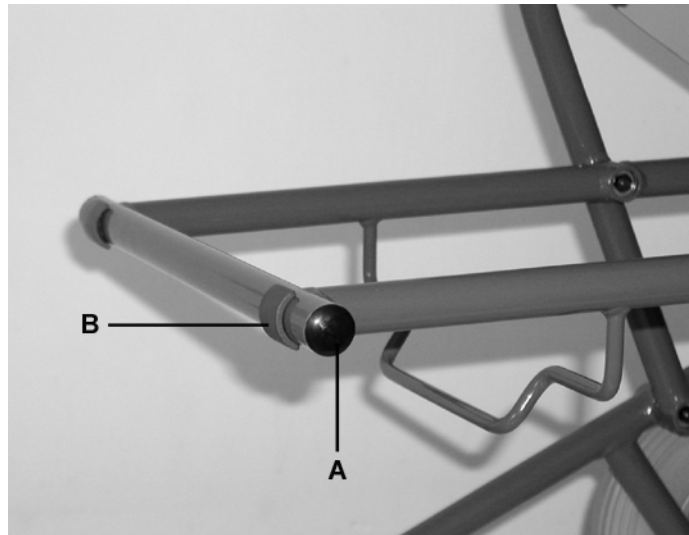


Figure 39

3.28 Seat Support Paint Protector Clip

Kit Number E0-00-1-073

Tools:

Screwdriver and/or

Pliers

Soft Mallet

Refer to Figure 39

1. Cover the flat tip of a screwdriver with masking tape or electrical tape to prevent paint damage
2. Remove the old Cap (39-B)
3. Align the new Clip's slotted stud (39-B) with the hole in the Tube. Tap it into place using a mallet or by squeezing with your fingers.

3.29 Rear Frame Paint Protector Clips

Kit number E0-00-1-071

Tools:

Screwdriver

Soft Mallet

1. Cover the flat tip of a screwdriver with masking tape or electrical tape to prevent paint damage
2. Remove the old clip (40-A) from the Tube (40-B)
3. Align the new Clip's slotted stud (40-A) with the hole in the Tube (40-B). Tap it into place using a mallet or by squeezing with your fingers.

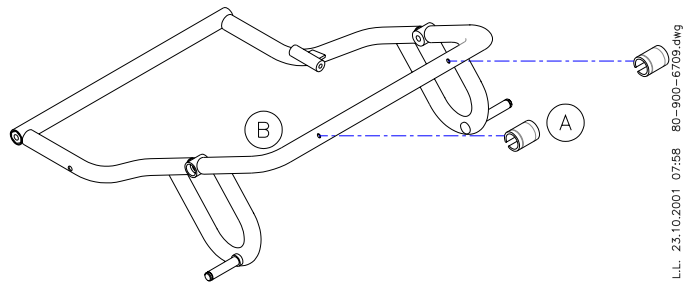


Figure 40

4. PROGRAMMING OF THE CONTROLLER

4.1 Introduction

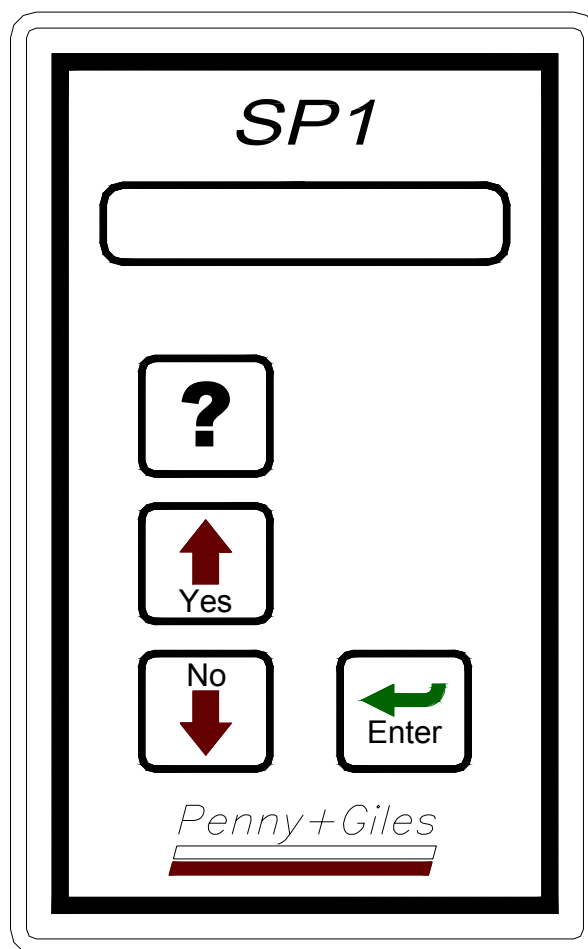
The **EasyTravel Lite** electric system is operated by the Solo or S-Drive Controller manufactured by Penny & Giles Technologies Ltd. (UK).

4.2 The SP1 Programmer

The SP1 is a handheld programmer for use with the Solo or S-Drive Controller.

The programmer is a menu-driven device, which plugs directly into the controller.

The SP1b Programmer (Engineering Version) can set all of the key controller speed, acceleration and braking characteristics, and allows different settings to be tried out while the programmer is still plugged into the controller. A context-sensitive help function is available to guide users through the menus and the SP1b can also display error messages from the controller. This allows any problems with the vehicle electrical system to be identified and corrected quickly.



L.L. 29.10.2001 09:29 Controller Programmer.dwg

Figure 41

WARNING

Programming should only be conducted by competent personnel with in-depth knowledge of Penny & Giles electronic controllers. Incorrect programming could result in an unsafe set-up of a vehicle for a user. Tzora Active Systems accepts no liability for losses of any kind if the programming of the controller is altered from factory pre-set values.

The following table shows the Solo or S-Drive Controller settings for the **EasyTravel Lite** as defined by Tzora Active Systems.

Function	Fast	Slow
Forward Acceleration	2.0 s	2.0 s
Forward Deceleration	0.9 s	1.3 s
Reverse Acceleration	3.0s	3.0 s
Reverse Deceleration	2.5s	2.5 s
Forward Speed	100%	50%
Reverse Speed	50%	30%
Invert Throttle Polarity	No	
Power Down Timer	10 min	
Current Limit	20A	
Motor Compensation	200mΩ	
Hold Factor	152%	
Mid Current	50%, 10 s	
Brake Time	0.1s	
ISO Tests	Off	
Inhibit Polarity	Lo	
Bridge Hold Time	200 ms	
Throttle Gain	750%	
Pulse Reverse Alarm	No	
Wig-wag Throttle	Yes	
Low Battery Flash Inhibit	No	
Throttle Deadband	15%	
Output Voltage	24V	
TruCharge Cable Resistance	40mΩ	
TruCharge Cal.	95	

4.3 Using The SP1b

Please contact Tzora Active Systems for more information about and the acquiring of the SP1b Programmer. The Programmer is shipped with an extensive guide. Please read the guide carefully before using the SP1b Programmer.

Setting parameters to incorrect values could damage controllers and motors, and invalidate any warranties.

5. FAULT FINDING

5.1. Introduction

Tzora Active Systems provides for profound training in Fault Finding to the major distributors of the **EasyTravel Lite**. Please contact the authorized Tzora Distributor in your country or Tzora for more information.

5.2 Electrical System

5.2.1 *Detecting that a Fault has occurred*

A fault is signaled by a rapid flashing of the status indicator. Care should be taken because the controller gives a low battery warning by a slow flash of the status indicator. This is not a fault, just a reminder that you should charge your batteries. To detect a fault in the Solo or S-Drive Controller, the SP1b Programmer is used. It can detect various faults, for instance a motor wiring fault, a throttle fault, a possible controller fault or a fault in the solenoid brakes.

5.2.2 *Fault Diagnosis using the SP1b*

The SP1b indications should only be used to decide the starting point of your own diagnosis, as it is possible for the controller to indicate a fault in another component even though the controller itself is at fault. Nevertheless, experience has shown that connectors and wiring are the major cause of vehicle electrical problems, so it is necessary to examine these most vulnerable areas first.

Further information is to be found in the Programming and Fault Finding Guide that is shipped with the SP1b Programmer.

5.2.3 *Servicing of Defective Solo or S-Drive Controllers*

There are no serviceable parts within the Solo or S-Drive Controller. Consequently, any defective units must be returned to Tzora Active Systems for repair.

Opening or making any unauthorized adjustments or modifications to the controller or its components will invalidate any warranty and may result in hazards to the vehicle user, and is strictly forbidden.

WARNING

Faultfinding and repairs should only be conducted by competent personnel, authorized by Tzora Active Systems. Incorrect repair or tampering could result in a hazardous defect in the *EasyTravel Lite*. Tzora Active Systems accept no liability for losses of any kind arising from unauthorized adjustment or modification to the *EasyTravel Lite*.

6. CONTROL CONNECTIONS AND ELECTRICAL WIRING

Please refer to the connection diagram, Figure 42. For more information please contact your authorized Tzora Distributor or Tzora Active Systems.

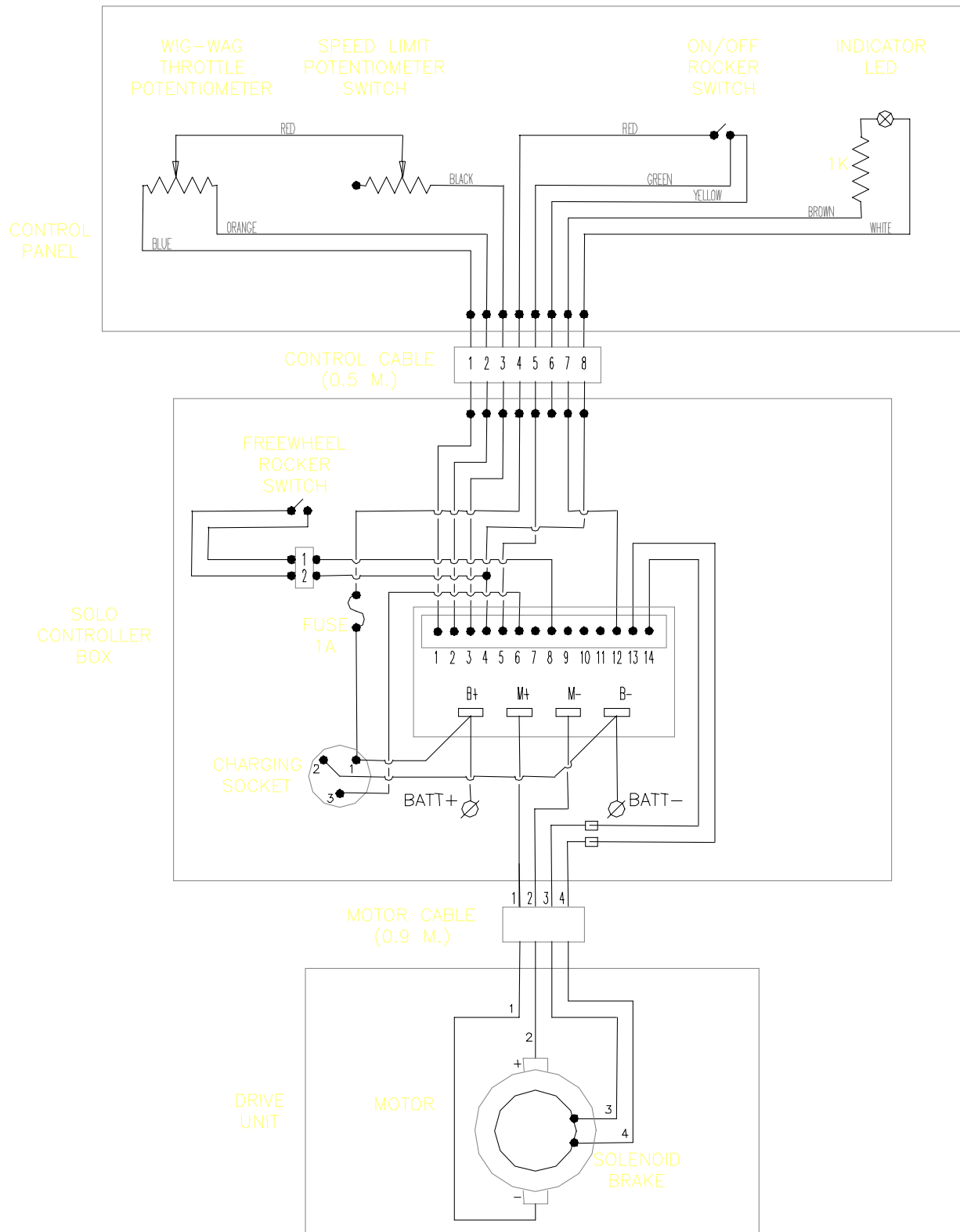


Figure 42

7. CHARGER

Technical data:

- 24 Volts, 2Amp Constant Current
(equivalent to 3A tapered charger in charging time)
- Universal Input 100VAC to 240VAC - **Suitable anywhere in the world**
- Automatic Cut-off and then true Float. Can be left connected indefinitely without harming the battery
- Size
 - Length: 165 mm (6.5")
 - Width: 80 mm (3.1")
 - Height: 50 mm (2.0")
- Weight
 - 550 grams (1.2 lbs.)

8. SPARE PARTS

8.1 List of Spare Parts Kits

Part Number	Description	Included in Kit	Page
E0-00-1-109	Control Panel Assembly – EasyTravel Lite	Control Panel, Top and Bottom Cover, Screws	7
E0-00-1-126	Handgrip pair		8
E0-00-1-106	Controller Cover	Controller Cover, Screws	9
E0-00-1-105	Solo Controller		10
E0-00-1-115	Battery Contacts	Battery contacts, Screws	11
E0-00-1-114	Interface Circuit Board	Screws	12
E0-00-1-112	Control Cable		13
E0-00-1-133	Motor End Cover	Screw	14
E0-00-1-108	Motor Brushes		15
E0-00-1-113	Power Cable	Securing Clip, Screw	16
E0-00-1-125	Front Wheel Assembly	Front Wheel, Allen Screw, Washer, Flat Cap	18
E0-00-1-107	Gear Motor		19
E0-00-1-122	Steering Column Stem		20
E0-00-1-123	Top Bearing for Steering Axis		21
E0-00-1-132	Column Release Cable Kit	Pin, Spring, Cable, Cable Guide, Adjustable Stop, Cable Stops, Release Bushing, Set Screws, End Cone, Vinyl Caps	22
E0-00-1-131	Black Vinyl Cap		24
E0-00-1-101	Battery Case	Electric Wiring, Screws	25
E0-00-1-102	Battery Cover – EasyTravel Lite	Screws	26
E0-00-1-116	Seat Assembly	Seat Bottom + Pad, Seat Back + Pad	27
E0-00-1-117	Seat Back Pad	Screws, Washers, Screw Covers	28
E0-00-1-118	Seat Bottom Pad	Screws	29
E0-00-1-119	Seat Backrest Lock		30
E0-00-1-120	Seat Attachment Bracket	Bracket, Sleeves, Screws	31
E0-00-1-121	Seat Guide Brackets		32
E0-00-1-130	Footrest Platform		33
E0-00-1-124	Rear Wheel Assembly	Rear Wheel, Circlip, End Cap	34
E0-00-1-129	Flat Cap (Front Platform)	2 Caps	35
E0-00-1-127	Seat Support Paint Protector Clips	2 Semicircle Clips	36
E0-00-1-128	Rear Frame Paint Protector Clips	2 Full Circle Clips	37

8.2 Spare Parts Kit Index

Part Number	Description	Page
E0-00-1-101	Battery Case	25
E0-00-1-102	Battery Cover – EasyTravel Lite	26
E0-00-1-105	Solo Controller	10
E0-00-1-106	Controller Cover	9
E0-00-1-107	Gear Motor	19
E0-00-1-108	Motor Brushes	15
E0-00-1-109	Control Panel Assembly – EasyTravel Lite	7
E0-00-1-112	Control Cable	13
E0-00-1-113	Power Cable	16
E0-00-1-114	Interface Circuit Board	12
E0-00-1-115	Battery Contacts	11
E0-00-1-116	Seat Assembly	27
E0-00-1-117	Seat Back Pad	28
E0-00-1-118	Seat Bottom Pad	29
E0-00-1-119	Seat Backrest Lock	30
E0-00-1-120	Seat Attachment Bracket	31
E0-00-1-121	Seat Guide Brackets	32
E0-00-1-122	Steering Column Stem	20
E0-00-1-123	Top Bearing for Steering Axis	21
E0-00-1-124	Rear Wheel Assembly	34
E0-00-1-125	Front Wheel Assembly	18
E0-00-1-126	Handgrip pair	8
E0-00-1-127	Seat Support Paint Protector Clips	36
E0-00-1-128	Rear Frame Paint Protector Clips	37
E0-00-1-129	Flat Cap (Front Platform)	35
E0-00-1-130	Footrest Platform	33
E0-00-1-131	Black Vinyl Cap	24
E0-00-1-132	Column Release Cable Kit	22
E0-00-1-133	Motor End Cover	14

9. LIST OF TOOL TYPES

Screwdrivers:

Phillips #1
Phillips #2
Short Phillips #2
Flat Blade

Allen Keys:

3 mm
4 mm
5 mm
6 mm

Wrenches:

Open End 8 mm
Open End 13 mm
Open End 32 mm

Loctites:

#242 (1312)

Other Tools

Cable Tie Tensioning Tool
Circlip Pliers (normal)
Circlip Pliers (small)
Clamps
Cleaning detergent
Crimp Tool
Cutter
Extractor
Light Grease/Lubricant
Pliers
Silicone Spray
Soft Mallet

The **EasyTravel Lite** and its accessories have been designed, manufactured and tested in accordance with the specification of the following:

DIRECTIVE: Medical devices 93/42 EEC



Manufactured by:



Kibbutz Tzora 99803, ISRAEL
Web Site: www.tzora.com

EC Authorized Representative:
Medical Specialities Ltd.
Blackburn, BB2 4HT UK